## **Cassandra Bergstrom**

From: Janie Schutz

**Sent:** Thursday, June 22, 2017 2:56 PM

**To:** Jon Holan; Michael W. Kinkade; Rob Foster **Cc:** Jesse VanderZanden; Daniel Riordan

**Subject:** RE: Road Grades and Emergency Vehicles in David Hill area

## Hi Jon.

Interesting question and a first in my career to get, so thanks, I think. ① In regards to police response, the grade of the road, at the levels you are asking about, would not have a significant impact on our operations with the current fleet of vehicles we have. Currently, we are slowly transitioning over to Ford Explorers with all -wheel drive, along with changing over to a different snow tire. I'm not super knowledgeable on this topic, but I am confident that our current fleet assets will be able to traverse the roadway, regardless of the incline, in adverse conditions with the appropriate traction control devices.

Thanks, Janie

From: Jon Holan

Sent: Thursday, June 22, 2017 10:04 AM

To: Michael W. Kinkade; Janie Schutz; Rob Foster

Cc: Jesse VanderZanden; Daniel Riordan

Subject: Road Grades and Emergency Vehicles in David Hill area

Dear All,

At the last Council meeting, CD staff made a presentation on the Westside Plan. One comment we received from Councilor Rippe had to do with street grades, impact on emergency services and safety concerns as the collectors approach intersections. He was concerned about the impact on response times due to the increase in slope and the impact of icy conditions on safety due to steeply sloped roads. He was expressing the need to have roads designed to follow contours.

Currently, collector standards have a maximum slope of 12%. I believe two portions of Forest Gale Drive (a collector) exceed the 12% standard for distances of 250 feet or less. (Note: for one segment, staff applied the standard for a local access road which allows up to 15% grade for a distance no greater than 250 feet for a portion of Forest Gale Drive near David Hill Road. This variance was supported by the Fire Marshall at the time it was reviewed several years ago.) The City standards also require a road landing of no greater than 5% within 20 feet of an intersection.

Due to topography, the proposed Plan and attendant Development Code amendments would amend these standards to increase maximum slope standards for collectors in the David Hill area roads to 15%. The plan also includes the following goals and policies related to road grades:

## Goal 8.1: Establish a context sensitive street network addressing the characteristics of the Westside planning area.

Policy 8.1.1: Required cut and fill for streets should be minimized to reduce cost and environmental impacts.

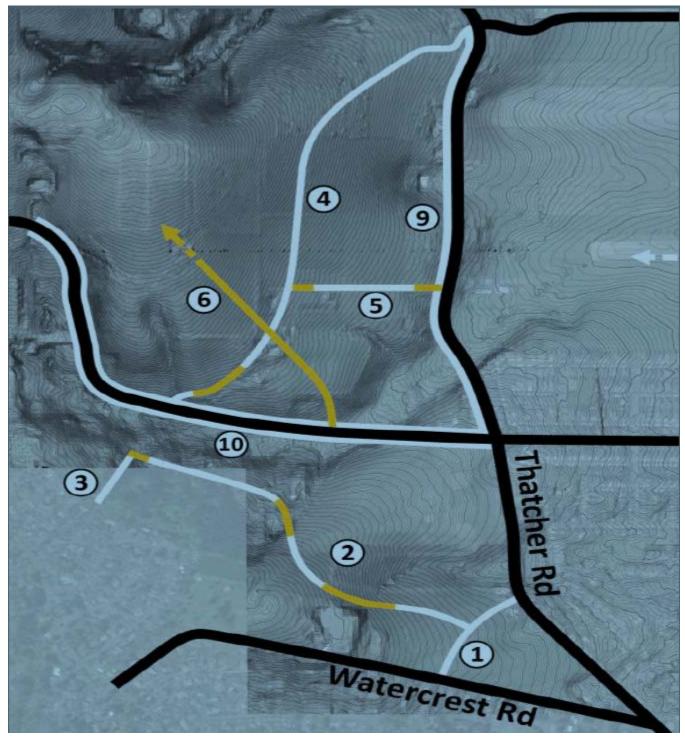
Action 8.1.1: Amend the Forest Grove Development Code to allow for collector street segments exceeding 12% slope to minimize required cut and fill and environmental impacts.

Action 8.1.2: Amend the Forest Grove Transportation System Plan and Development Code to reduce the minimum right-of-way and street cross-section requirements in areas with environmental constraints.

Policy 8.2.1: Local streets serving individual homes should follow slope contours to minimize necessary cut and fill and avoid street segments exceeding 12% slope.

Action 8.2.1: Amend the Forest Grove Development Code

The tradeoff from these policies is to minimize environmental impact in exchange for some roadways having steeper slopes of up to 15%. The roadways in yellow on the map below shows the potential roadway segments which appear to exceed 12% (but no greater than 15%). Keep in mind that this is looking at the 50,000 foot level and not based on anything too precise in terms of road location or slopes.



The questions for the three of you are as follows:

Michael and Janie: What impact on emergency response is there on road slopes greater than 12% and is there a maximum distance over 12% that should be imposed? (I presume this is would mainly be a Fire response issue but also wanted Police input as well. Simply saying "the less the better" is not a response as we all want to minimize this as much as possible. The development type would be single family dwellings with the possibility of condos in the triangle area of roads 5, 6 and 10.)

Rob: Will a 20 foot long landing be adequate in icy conditions and should the landing requirement be extended (of so, for how much)?

Dan will be looking at Beaverton and Tigard standards for their hillside areas for comparison, but I think we are similar to those standards.

We need to have the plan material to Anna by next Friday. So a response from all of you by next Wednesday would be appreciated.

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